KNOWLEDGE MANAGEMENT PRACTICES, ORGANIZATIONAL LEARNING CAPABILITY AND INNOVATION OF PROFESSIONAL DEVELOPMENT: AN EMPIRICAL STUDY IN PRIVATE HIGHER EDUCATION INSTITUTIONS

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ABSTRAK

Disebabkan oleh persaingan sengit dan tekanan daripada kesan globalisasi, negara-negara Asia termasuk Malaysia berpendapat perlunya kelebihan daya saing sebagai matlamat untuk menjadikan negara masing-masing sebagai hab pendidikan serantau Asia. Oleh sebab itu, pendidikan memainkan peranan penting dalam mewujudkan kelebihan daya saing dan ia juga dianggap sebagai pelaburan penting dalam memupuk modal insan. Kerajaan berusaha secara berterusan untuk meningkatkan tahap kualiti pendidikan dan menghasilkan jenama antarabangsa bagi Malaysia melalui institusi pendidikan tinggi swasta. Berdasarkan misi tersebut, inovasi pengembangan profesionalisme pensyarah di institusi pengajian tinggi swasta perlu dipertingkatkan bagi mencapai lestari dalam prestasi dan kualiti pendidikan. Pengetahuan memainkan peranan penting dalam proses yang membabitkan innovasi dan amalan pengurusan pengetahuan dianggap sebagai elemen penting dalam pembelajaran organisasi. Demi mencapai tujuan ini, objektif utama kajian ini direka untuk memahami kesan amalan pengurusan pengetahuan terhadap inovasi pensyarah dalam pengembangan profesionalime melalui pembelajaran organisasi sebagai pengantara. Sejumlah 105 maklumbalas yang boleh diguna daripada ahli-ahli akademik di institusi pendidikan tinggi swasta diperolehi melalui soal selidik. Analisis regresis berhierarki digunakan untuk menguji hipotesis dalam kajian ini. Hasil kajian menunjukkan bahawa hanya dua dimensi (penghasilan dan penyebaran) dalam amalan pengurusan pengetahuan didapati adalah signifikan dengan inovasi pengembangan profesionalisme pensyarah melalui pembelajaran organisasi sebagai pengantara. Di samping itu, kajian ini juga mendapati dua dimensi dalam pembelajaran organisasi (komitmen pengurusan

dan keterbukaan dalam ujikaji) didapati menjadi pengantara dalam hubungan antara amalan pengurusan pengetahuan dan inovasi pengembangan profesionalisme pensyarah.

ABSTRACT

Many Asian countries including Malaysia see the dire needs to gain competitive advantage due to stiff competition and pressure from the effect of globalisation in order to become the regional education hub of Asia. No doubt, education plays a significant role in creating competitive advantage and is regarded as an important investment in cultivating human capital. Government has committed endless effort through private higher education institutions to raise the education quality standards and to create an international brand for Malaysia. Based on such vision, lecturer's professional development in private higher education institutions must be enhanced through innovation to achieve sustainable in education quality and performance. The process of innovation depends heavily on knowledge and knowledge management practices are regarded as critical elements in organizational learning. Hence, the primary objective of this study is to understand the effect of knowledge management practices on lecturer's innovation of professional development through organizational learning as the mediator. A total of 105 usable respond from academicians in private higher education institutions were obtained via questionnaires. To test the hypotheses, hierarchical regression analysis was used in this study. The results of this study revealed that only two dimensions (creation and dissemination) in knowledge management practices are found to be significant to lecturer's innovation of professional development through organizational learning. In addition, this study also demonstrates that two dimensions in organizational learning (management commitment and openness and experimentation) mediate the relationship between knowledge management practices and lecturer's innovation of professional development.

CHAPTER 1

INTRODUCTION

1.1 Background of Study

Malaysia focuses on 12 National Key Economic Areas (NKEA) to boost the economy and achieve a high income status by 2020 (PEMANDU, 2010b). One of the 12 NKEAs concentrate at the core of the Economic Transformation Programme (ETP) is the education sector. According to the ETP education handbook (2010a), by the Performance Management and Delivery Unit (PEMANDU), the education sector in the NKEA focuses on strengthening private education services sectors by being in a partnership with the government to achieve a high-income nation status. Their vision was to rebrand Malaysia to become the centre educational hub in Asia. Following the message from the Deputy Prime Minister and Minister of Education, YAB Tan Sri Dato' Haji Muhyiddin Bin Mohd Yassin, states that Malaysian government has committed all their effort to unleash the full capability of the private education sector through removal of barriers to growth and entry of the private education sector (PEMANDU, 2010a).

Education plays a vital role as one of the most critical drivers in the transformation of a nation's high income status due to its impact on human capital development and productivity (PEMANDU, 2010b). Consequently, the education sector in Malaysia has made a contribution of approximately RM 27 billion which is equivalent to four percent of the nation's gross national income (GNI) in 2009 — although RM 23 billion are actually from government-funded education services (PEMANDU, 2010b). In view of the increment in public education sector spending, the government has taken action by focusing the NKEA of education to private

education services through the increment in private consumption and investment as well as expanding education exports (PEMANDU, 2010a).

In Malaysia, higher education has been the primary focus since beginning of the twenty first century. The federal government is committed in providing quality education to the citizen through the 9th Malaysian Plan (9MP) where a total of RM 40.3 billion has been allocated for the expenditure of training development and education (MOHE, 2011). This is in line with 1989 National Philosophy of Education which emphasizes the development of citizens to attain more knowledge and to benefit the nation with the attained knowledge (MOHE, 2011).

The private education sector in Malaysia has undergone significant growth since the 1980s. Multimedia University (MMU) is the first private university in Malaysia which had been set up by Telekom Malaysia Berhad (TM) in 1997 (TELEKOM, 2009). Private universities and colleges establishment in Malaysia were made possible because of its Private Higher Educational Institutions Act 1996 (JPT, 2011b). As a result, the private higher education sector has grown significantly since then. A total of 541,629 students enrolled with private higher education institutions (HEI) in 2010 compare with 484,377 students in 2009 (MOHE, 2010). This result shows an increment of 10.6% from 2009 to 2010.

Private HEIs in Malaysia is categorized into two, namely Private HEIs of University status and Private HEIs of Non-University status (JPT, 2011a). For Private HEIs with University status, it is further categorized into three categories namely Private HEIs of University status, University College and Foreign University Branch campus (JPT, 2011a). At present, a total of 25 Private HEIs with university status, 22 University Colleges, and 5 Foreign University branch

campuses are operating in Malaysia (JPT, 2011b). The statistics for the number of private HEIs registered in Malaysia is shown in Table 1.1.

Table 1.1:

Number of Private Higher Education Institutions

Private higher education institutions	**2009**	**2010**	**July 2011**
University	20	23	25
International University Branches	5	5	5
University College	20	21	23
Total	**45**	**49**	**53**

Source: Ministry of Higher Education Malaysia

Besides catering to the need of Malaysians, many private HEIs have gone global with intentions to bring more international students into our country. The Education NKEA is targeted to triple foreign student enrolment from approximately 70,000 in 2009 to 200,000 students by 2020 with the help from private education sectors (PEMANDU, 2010a). In 2009, there are a total of 58,294 international students enrolled in various level of education in private higher education institutions in Malaysia (MOHE, 2010). The enrollment of international students has increased to 62,705 students in 2010 which is an increment of 7 percent (MOHE, 2010). International students choose to study in Malaysia because of the quality of education programs provided, low cost of living and affordable tuition fees. This has made Malaysia the better alternative for pursuing the tertiary education when compared to neighboring countries.

The quality of educational institutions in Malaysia is being monitored and enforced by the Malaysian government under the legislation such as the Private Higher Educational Institutions Act 1996, Education Act 1996, and The Malaysian Qualifications Agency Act 2007. In particular, the purpose of the Malaysian Qualification Agency (MQA) is to provide constant monitoring and guidelines to the education institutions of different level in Malaysia to meet the utmost standards in education and widely recognized internationally (JPT, 2011b). The ministry of Education in Malaysia has an aggressive plan to provide training for new educators and improve existing ones. The effort can be seen from a total funding of RM 500 million to be allocated by the government to build several training centres for teachers which will generate an additional RM 434 million in GNI by 2020 and create 430 jobs (PEMANDU, 2010a).

Despite the growth of private universities and students' enrolment, the qualities of our lecturers' innovative instructions have been the subject of numerous discussions among practitioners and researchers mainly because of a lack of professional training. A lecturer's responsibilities are not only limited to providing information or knowledge about a subject to the class, but also to develop the capability for a student's personal development through teaching and learning. According to Garcia-Morales et al. (2006), educators should first identify, support, and preserve learning as a valuable tool for obtaining long-term benefits.

Recently, higher education institutes and researchers have turned their attention to knowledge management. Many disciplines have contributed to the growth and evolution of knowledge management. According to IDC (2002), global corporate spending on knowledge management services is expected to increase from USD 4.2 billion in 2003 to USD 8.9 billion by 2006. In economies dominated by services, where people and information are the primary drivers

of business, the knowledge and its effective management is treated with particular attention (Magnier-Watanabe & Senoo, 2009). However, the concept of knowledge management is rather new, especially in Malaysia. Many organizations are not familiar with knowledge management. In addition, the effect of knowledge management practices on higher private institutions is not known.

Knowledge management practices are the main activity carried out in higher education. The reason is because lecturers are people who have knowledge while students are people who want the knowledge. The institution's management in the other hand plays the role to facilitate knowledge transfer between lecturers and students.

In this rapid change of economics, many higher education institutions are striving to remain competitive in order to expand and gain advantage over other competitors. Organizational learning has been regarded as one of strategic methods in achieving long term success (Liao & Wu, 2010). Furthermore, it is essential for business to keep learning in order to maintain its competitiveness. Capability of organizational learning can easily be integrated and extend if an institution already has well based structured knowledge in their institutions. In other words, organizational learning capabilities are the fundamental for individual learning (Liao & Wu, 2010).

Given the importance of lecturer's innovation in enhancing the private higher education institutions growth and performance and the potential role of knowledge management practices and organizational learning in stimulating the lecturer's innovation; examining the effect of these

two variables on lecturer's innovation particularly in professional development among private higher education institutions is warranted.

1.2 Research Problems

Malaysia has placed paramount importance on science and technology to achieve its vision 2020 which is to establish a scientific and progressive society; a society that is innovative and forward looking (Sharif & San, 2001). Thus, Malaysia's private higher education sector has undergone remarkable growth and is widely recognized today in international level (PEMANDU, 2010b). However, there are number of problems that may threaten the further growth of this industry in this country. One of the problems face by private higher education institutions is due to wide variation in quality and consistency of teaching and learning standards between public and private higher education institutions (PEMANDU, 2010b).

Recent release of QS 200 World University Rankings 2011 shows that University of Malaya (UM) making into the position of 167 compared with 207 in 2010 (Chooi, 2011). The rankings were followed by University Kebangsaan Malaysia (UKM) ranked 279 compared to 263 in 2010 and University Sains Malaysia (USM) ranked 335 (309 in 2010). The result shows that only one Malaysian university made it to the top 200 institutions in the QS World University Rankings 2011/2012. Moreover, in Malaysia, the 27 percent unemployment rate for students graduated after six months imply that there is a difference in quality needed in a worker compared with what is produced by the universities (PEMANDU, 2010b).

Quality and consistency in teaching and learning is related to lecturer's innovation in professional development. According to Zhao (2009), lecturer's professional development includes expertise knowledge and capabilities, subject knowledge and capabilities, professional attitudes and general knowledge and capabilities. However, there is a lack of research on factors affecting the lecturer's innovation of professional development performance in higher education (Chang, Yeh, Chen, & Hsiao, 2011; Garcia & Roblin, 2008). Most of the research on factors affecting lecturer's innovation of professional development tends to refer to their attitudes through self-directed development (Brown, Ferril, Hinton, & Shek, 2001; Grootenboer, 1999; Ho, 2008), despite evidences showing that lecturer's innovation of professional development should not be limited only to individual behaviors (Chang, et al., 2011; Khamis & Sammons, 2004). Furthermore, this study also probes into the relationship of knowledge management practices, organizational learning and innovation of professional development in higher education and how they relate to each other.

As technologies advances and teaching methods are updated, lecturer's classroom activities are becoming more complicated. Although sharing of teaching related knowledge among lecturers may help each other to solve the problems they face, studies show that most lecturers do not interact in a culture of knowledge exchange (Hou, Sung, & Chang, 2009). In simple term, lecturers rather choose to design the teaching activities in isolation than sharing teaching-related knowledge with each other. Due to the fact that most of the teaching-related knowledge is often tacit; as a result, lecturers are often unable to effectively access relevant experiences and knowledge from their peers when facing problem (Hou, et al., 2009).

There were several studies that examined the direct relationship between knowledge management practices and lecturer's professional development performance (Yeh, Huang, & Yeh, 2011; Zhao, 2009). However, there are lack of research that examines the indirect relationship between knowledge management practices and lecturer's innovation of professional development. Past researches showed that the issues related to knowledge management are complicated (Liao & Wu, 2010)

Some knowledge management practices research are related to organizational structure and some are firm performance (Bayyavarapu, 2005; Davis & Mentzer, 2002; C. Liao, Chuang, & To, 2010); while most researches on knowledge management practices are related to organization innovation (Chen, Huang, & Hsiao, 2010; Gloet & Terziovski, 2004; Hung, Lien, Fang, & Mclean, 2010; Liao & Wu, 2010; Plessis, 2007)

Living in the current rapid-change world, many institutions must adapt and update its knowledge in order to maintain its competitive advantage. Private higher education institutions lecturers do not only depend on providing knowledge to students but also to engage in knowledge exchange internally between departments or faculties. Some institutions even engaged in managing and collaborating existing knowledge externally with other institutions and/or organizations which are sharing the same areas of interest (Ramachandran, Chong, & Ismail, 2009). Most of the research on knowledge management practices focuses in the area of manufacturing industries (Bayyavarapu, 2005; Chen, et al., 2010; Davis & Mentzer, 2002; Gloet & Terziovski, 2004; Hung, et al., 2010; Liao & Wu, 2010; Plessis, 2007). However, there is a lack of researches to examine the influence of knowledge management practices on lecturer's innovation of professional development in the area of private higher education institutions.

Most studies carried out on knowledge management practices focus on 3 dimensions which are knowledge acquisition/creation, knowledge sharing, and knowledge application (Huang & Li, 2009; Ralph, 2003). However, this study focuses on more comprehensive knowledge management practices such as acquisition, application, creation, storage, diffusion and presentation, retrieval, and codification (Lettieri, Borga, & Savoldelli, 2004). The dimension of knowledge management practices identified in this study are knowledge creation (Alavi & Leidner, 2001; Lawson, 2003; Ramachandran, et al., 2009), knowledge organization (Lawson, 2003; Ramachandran, et al., 2009), knowledge storage (Alavi & Leidner, 2001; Lawson, 2003; Ramachandran, et al., 2009), knowledge dissemination (McAdam & Reid, 1999; Ramachandran, et al., 2009; Steyn, 2004), and knowledge application (Alavi & Leidner, 2001; Gold, Malhotra, & Segars, 2001; Mills & Smith, 2010). Therefore, this study is to discover whether these five knowledge management practices have an effect on lecturer's innovation of professional development in private higher education institutions.

Based on review of literatures, organizational learning is positively related to organizational innovation and performance (Garcia-Morales, Llorens-Montes, & Verdu-Jover, 2007; Garcia-Morales, et al., 2006; Liao & Wu, 2010). A research has been carried out by Chang et al., (2011) indicating that organizational learning, task autonomy, and group cohesiveness influence the innovation of a teacher's professional development. Although many organizational learning literature are related to organizational innovation and performance, not much research has been carried out on the lecturer's innovation in professional development (Chang, et al., 2011). Recently, there is a research indicating the impact of instructional development in higher education on a teacher's learning, a teacher's behavior, the institution, and the students (Stes,

Min-Leliveld, Gijbels, & Petegem, 2010). However, there is no indication of organizational learning involved in the studies. Furthermore, organizational learning is the key component of organizational knowledge through the process of knowledge creation generated through its individuals and groups thus improving the firm's performance and results (Ussahawanitchakit, 2008b).

Huber (1991) undertook a critical analysis of the organizational learning literature by elaborating literatures from four constructs that are linked to organizational learning. The constructs consists of organizational memory, knowledge acquisition, information distribution, and information interpretation. He however concluded that there was lack of synthesis of the work on organizational learning. Thus organizational learning has proven to be somewhat an elusive concept to grasp and predictably; its practical implementation has also been difficult (Watson, 2002). Liao, Chang, and Wu (2010) argue that learning orientation can lead to encouraging culture for innovation. Moreover, it can improve the capability and individual behavior so that the organization can be more efficiently respond to its environment (Liao, et al., 2010). Hence, this study will determine whether organizational learning is the missing link between knowledge management and lecturer's innovation of professional development in private higher education institutions.

Against this backdrop, given a combined interest in knowledge management practices, organizational learning and lecturer's innovation in professional development performance, this study would like to examine the direct effect of:

(a) knowledge management practices and lecturer's innovation in professional development

(b) knowledge management practices and organizational learning

(c) organizational learning and lecturer's innovation in professional development

Besides that, this study would also examine the indirect effect of organizational learning as mediator on the relationship between knowledge management practices and lecturer's innovation in professional development.

1.3 Research Questions

This study attempts to answer the following research questions:

1. Do knowledge management practices influence lecturer's innovation of professional development?
2. Do knowledge management practices influence organizational learning capability?
3. Does organizational learning capability influence lecturer's innovation of professional development?
4. Does organizational learning capability mediate the relationship between an organization's knowledge management practices and lecturer's innovation in professional development performance?

1.4 Research Objectives

From the research questions, the objectives of this study are:

1. To examine whether knowledge management practices have an impact on lecturer's innovation in professional development performance.
2. To examine whether knowledge management practices have an impact on organizational learning capability.
3. To examine whether organizational learning capability have an impact on a lecturer's innovation in professional development performance.
4. To examine whether organizational learning capability mediates the relationship between an organization's knowledge management practices and a lecturer's innovation in professional development performance.

1.5 Significance of the Study

This study offers theoretical and practical contribution to the research on knowledge management practices, organizational learning and lecturer's innovation of professional development in private higher education institutions. This study utilizes a few theories. The first would be knowledge-based view theory where knowledge are considered as important resources contributing to value-added in services for a private higher education institutions (Grant, 1997). The knowledge-based view suggests that, knowledge transfer is considered as the primary

process while employees are the primary stakeholders in an institution because knowledge is created and stored within an individual (Grant, 1997).

Organizational knowledge creation theory suggests that knowledge creation is a synthesizing process where an organization interacts with the environment and individuals in the organization. This interconnection among human agency and social structure created knowledge through such interactions. In simple terms, human interactions and actions with its surrounding will create knowledge within an organization.

This study focuses on five knowledge management practices which are knowledge creation, knowledge organization, knowledge storage, knowledge dissemination, and knowledge application which are widely acknowledge by previous scholars (Adhikari, 2010; Ford, 2003; Gold, et al., 2001; Lettieri, et al., 2004; McAdam & Reid, 1999; Mishra & Bhaskar, 2011; Ramachandran, et al., 2009). Based on theory of cognition learning, it would be interesting to find whether these five knowledge management practices has an indirect effect on lecturer's innovation of professional development through organizational learning.

In practical terms, this study will further contribute to the literature on innovation in professional development among private higher education institutions within Malaysian context. There is not much information that can be obtained on lecturer's innovation of professional development in Malaysia. Most of the literatures only focus on lecturer's individual behaviour rather than on their professional development (Brown, et al., 2001; Grootenboer, 1999; Ho, 2008).

Many research has been conducted on the existence of relationship between knowledge management practices and organizational learning (Liao & Wu, 2009, 2010; Ussahawanitchakit, 2008a), as well as relationship between organizational learning and lecturer's innovation of professional development (Chang, et al., 2011; Garcia & Roblin, 2008; Kezar, 2005). Nonetheless, there are no literatures that linked the three variables together. Thus, the results from this study can help to prove whether the proposed hypotheses are valid in the context of private higher education institutions in Malaysia. Furthermore, the findings of this study can help in determining the multi dimension of knowledge management practices in fostering lecturer's innovation of professional development.

The findings of this study will also help to serve as a proper guideline for private higher education institutions in Malaysia to implements knowledge management programme in their institution. The benefit of the knowledge management programme will lead to generation of competitive advantage in institution's performance (Liao & Wu, 2009). In the other hand, organizational learning capability in the institutions will generate an environment that encourage learning and creativity thus creating a productive and effective workplace for their workers (Kezar, 2005). Lastly, improvement of lecturer's innovation of professional development will help the institutions maintain quality education provided to the students (Chang, et al., 2011).

1.6 Definition of Terms

For this research, the following are the terms used and how it is defined for the purpose of the study.

1.6.1 Knowledge Management Practices

Knowledge management practices are defined as a set of practices used by organization through knowledge where ideas, and other intangible intellectual capital assets are transformed into tangible intellectual assets which are measurable (Gupta, Lyer, & Aronson, 2000). In this study, five dimensions of knowledge management practices were examined, namely knowledge creation, knowledge organization, knowledge storage, knowledge dissemination, and knowledge application. The definition for each dimension was adapted from Lawson (2003).

- Knowledge creation is termed as the level of conscious effort by institutions to explore and define relevant knowledge, and its sources from inside and outside the institutions. Knowledge is created through discovery, where employees develop new ways of doing things or it is brought in through external sources.
- Knowledge organization is defined as the level of implementation by the institution through filtering to categorize and identify the useful dimensions of the knowledge for various products or services. The knowledge is then placed in context so that it remains relevant, constantly updated and reviewed.

- Knowledge storage is termed as the level of implementation by institutions in storing codified knowledge in a proper format so that other members in the institution can access it easily. Data warehousing and database management can further improve this process.
- Knowledge dissemination is termed as the level of implementation by institutions in personalizing and distributing knowledge in a constructive format to meet the specific needs of different users. The knowledge is articulated in a common language and uses tools that are understood by all the users.
- Knowledge application is defined as the level of implementation by institutions in applying knowledge to new situations where users can create and learn new knowledge. In this learning process, there should be critical evaluation and analysis to create new patterns and knowledge for future use.

1.6.2 Organizational Learning Capability

Organizational learning capability is defined as the activities in which institutions do in transforming the learning capability which includes individuals in the organization and their competitors (Liao, et al., 2010; Liao & Wu, 2010) In summary, organizational learning is a process by which organizations which consists of group of individuals that learn through interaction with its surrounding environment (Sinkula, 1994). For this study, organizational learning capability contains four dimensions based on Jerez-Gomez et al., (2005) framework: managerial commitment, system perspective, openness and experimentation, and knowledge

transfer and integration. However, the definition for the four dimensions is based on literature by (Ussahawanitchakit, 2008a):

- Management commitment is referred as the ability of firms to develop and facilitate leadership management and managerial support for the innovation process and employee motivation in creating and building knowledge in an organization (Ussahawanitchakit, 2008a).
- System perspective is termed as the ability of firms to bring organizational members together around a common identity and a shared vision, interconnect the activities of employees which include the promotions of joint actions, and develop relationships based on the exchange of information and shared mental models (Ussahawanitchakit, 2008a).
- Openness and experimentation is defined as the ability of firms to build a climate of openness and experimentation in accepting new ideas and points of view in both internal and external aspects, and allowing individual knowledge to constantly improve, renew, and widen (Ussahawanitchakit, 2008a).
- Knowledge transfer and integration is defined as the ability of firms to internally spread knowledge through the verbal and nonverbal communications, which include formal and informal conversations, debate, dialogue and interaction among individuals, and effectively exploiting knowledge through the information systems that aid in the availability, accuracy, and reproducibility of the information (Ussahawanitchakit, 2008a).

1.6.3 Lecturer's Innovation of Professional Development Performance

A lecturer's innovation of professional development performance is defined as a process of continuous development and enhancement of their individual skill through persistent learning and exploration. Examples of the process include participation in various local or foreign professional associations and studies after classes by joining advanced studies in universities or those related to instruction /teaching skill (Chang, et al., 2011) .

1.7 Organization of the chapters

This research is divided into five chapters. Chapter 1 highlights the background of the study, the problem statement, research questions, research objectives, significance of the study, and the definition of variables. Chapter 2 presents literature review from previous study involving knowledge management practices, organizational learning capability, and innovation of lecturer's development performance. In this chapter, hypotheses were formulated for development of theoretical framework based on the review of literature. Chapter 3 includes the research methodology of the study. Discussions were focused on topics related to sample design, research approach, questionnaire design, data collection procedure, and statistical analysis techniques. Chapter 4 presents the data analysis and discusses the results of the statistical analysis. Lastly, Chapter 5 discusses the implications, limitations, recommendations for future research, and conclusion.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

In this chapter, the relevant literature for this study is reviewed. The purpose of this chapter is to provide an understanding of the independent variables (knowledge management practices), mediating variables (organizational learning capability) and dependent variables (the lecturer's innovative professional development performance) used in this study. The literature review consists of the following subject areas: innovation of professional development, organizational learning capability, and knowledge management practices. Past literatures on knowledge management practices leading to organizational learning capability and how organizational learning capability mediates between knowledge management practices and the lecturer's innovative professional development were discussed. The theoretical framework and hypotheses for this study will be studied and discussed towards the end of the chapter.

2.2 Innovation of Professional Development in Higher Education

There are several definitions for innovation that can be found in literatures. However, they all share the common theme when relating to knowledge which is utilizing new products or services to improve competitive advantage and meeting customer's varying needs. The U.K. department of trade and industry under innovation unit, defines innovation simply as 'the

successful exploitation of new ideas' (Prabha, 2007). According to Jimenez and Sanz-Valle, (2011), organizational learning, innovation, and performance relate positively to each other.

Tam (2001) and Cheng and Tan, (1997) argued that the concept of quality in higher education has many different views. Some may emphasize the quality of processes and outcomes whereas others emphasizes the quality of inputs to the education system (Cheng & Tan, 1997). To a committed scholar, quality education refers to a university's ability to continuously produce people with high intelligence and commitment to learning (Tam, 2001). However to the government, a high quality service is one that is able to continuously produce trained doctors, engineers, scientist, and architects to serve the country and society (Tam, 2001).

In today's fast changing environment, higher education institutions have adapted to business enterprise operations in order to stay competitive. A. Bartlett Giamatti, the former Yale president, argued that education institutions have a lot in common with private businesses in terms of how it operates; and that services provided, functions, activities, and careers that did not exist ten years ago have become familiar in many universities (Nadler, Miller, & Modica, 2010). At such, many institutions are constantly looking for new, innovative ways to increase their competitive advantage (Muscatello, 2003). In Hong Kong, a number of policy efforts have been put up to improves education aspects and one of the improvement efforts is to improve teacher's innovativeness in education (Cheng & Tan, 1997).

Avalos (2011) argued that teacher learning and development is a complicated process and that teachers are subjects of learning and development. This argument was supported by Chitpin et al., (2008) who stated that teaching is a complex and problematic endeavor which is difficult

to understand and master. Teachers learn about teaching “by teaching and from teaching” (Myers & Simpson, 1998).

2.2.1 Importance of Lecturer’s Innovation of Professional Development

Most of the measures of performance in HEIs focuses on service quality provided using measurement instrument such as service performance (SERVPERF) and service quality (SERVQUAL) (Landrum, Prybutok, & Zhang, 2007; Mostafa, 2006; Tan & Kek, 2004). Wang (2010) argues that the performance of universities can be measured by the extent to which the university can maintained toward achieving the university goal. This can be done through measurement in academic performance and management performance.

Performance measurement in HEIs has been focused on output and outcome measurement such as student’s completion rate, results, and labor market success of graduates (Chua, 2004; Johnes, 2006; Wang, 2010). For instance, Chua (2004) adopted the Input-Process-Ouput (IPO) framework to measure the performance of HEIs where ‘input’ is considered as the entry requirements, ‘process’ refers to learning and teaching process, and ‘output’ refers to student’s employability after their graduation and their academic standing (Chua, 2004). However Wang (2010) argues that ‘output’ measures fail to catch the whole process of academic activities, and the ‘input’ and ‘process’ measures should also be included in the performance measurement of universities.

Teaching and learning process plays an important role to determine the performance of higher education institutions (Cheng & Tan, 1997). With regards to a lecturer's professional development, teaching is a professional job and lecturers need to constantly develop new knowledge and enhance their individual skills (Chang, et al., 2011). However, there is lack of discussion in terms of measurement of a lecturer's professional development performance although a lecturer plays an important role in determining the quality of the HEIs. A lecturer's professional development refers to development, renewal and expansion of the knowledge and skill (Chang, et al., 2011). A lecturer's professional development is based on their knowledge, which can be obtained through experience and then presented with reflection and innovation through varied activities (Chang, et al., 2011).

2.3 Data, Information, and Knowledge

There is a lot of effort that has been put in discussion on "What is knowledge?" However, there is no undisputed definition of knowledge. Previous literature defined knowledge management by distinguishing it into knowledge, information, and data. Data is a set of discrete, objective facts about events (Paliszkiewicz, 2007). Data can be described as raw numbers, sounds, words, and images that are derived from observation or measurement (Paliszkiewicz, 2007). Information in the other hand represents data arranged in a proper pattern, where intellectual input is added (Paliszkiewicz, 2007). Knowledge can be understood as production of data and/or information through the process of application and analysis (Paliszkiewicz, 2007). In

short, data consists of facts and raw value; information is processed data, while knowledge is refers as authenticated information (Alavi & Leidner, 2001; Kidwell, Linde, & Johnson, 2000).

Knowledge is information possessed in the mind of an individual that may be new, unique, useful, or accurate (Alavi & Leidner, 2001). The author relates knowledge to concepts, facts, ideas, interpretations, judgments, observations, and procedures that belongs to every individual. According to Alavi and Leidner (2001), knowledge is described as a state of mind. Without meaning, knowledge is merely disorganized information. Nonaka and Takeuchi (1995) in the other hand defined knowledge as a dynamic human process through justification of personal principle towards the truth. According to this definition, it can be understood that knowledge represents a set of justified beliefs that enhances an organization's capability to achieve effective operation (Adhikari, 2010).

2.3.1 Tacit and Explicit Knowledge

Michael Polanyi is credited with making the distinction between two dimensions of knowledge in organizations: tacit knowledge and explicit knowledge. Nonaka and Takeuchi further define the characteristics of these two types of knowledge (Lawson, 2003). Explicit knowledge is refers as documented information that can be put into action. It can be expressed in formal, shared language (Kidwell, et al., 2000). Alavi and Leidner (2001) define explicit knowledge as codified and structured knowledge which can be easily communicated and stored in symbolic form and/or natural language. In academic context, Adhikari (2010) considered explicit knowledge as a type of knowledge that can easily be captured, and shared with other

people either through reading books or thought courses. The most common example of an explicit knowledge is the operation manual of an electronic product. One can obtain information on how to operate the electronic device from the manual (Alavi & Leidner, 2001).

Tacit knowledge can be defined as knowledge that is rooted in actions, experience, and involvement in specific context. It can be furthered divided into cognitive tacit and technical tacit (Alavi & Leidner, 2001). Technical tacit involve the know-how applicable to specific work such as knowledge through surgery skills, while cognitive tacit is the mental models which involves individuals' belief on cause-effect relationships (Alavi & Leidner, 2001). Adhikari (2010) believes that tacit knowledge is hard to formalize and express in action or words, therefore difficult to be shared with others. Tacit knowledge includes skills and "know how" that a person has which cannot be shared easily and can only be acquired through practices over several years (Adhikari, 2010). An example of tacit knowledge is knowledge by conversing with a customer using hard sell, flattery, or direct approach.

Many researchers have agreed on the assumption that tacit knowledge is more valuable than explicit knowledge (Alavi & Leidner, 2001). However, there is also an exception when Bohn (1994) argued that explicit knowledge is more valuable than tacit knowledge through the usage of technology to aid in the knowledge processes (Alavi & Leidner, 2001). Tacit and explicit knowledge are not different types of knowledge, instead they are mutually dependent and that tacit knowledge is the base in generating and interpreting explicit knowledge (Alavi & Leidner, 2001). This linkages suggests that true knowledge can only be exchanged when individuals have a certain shared knowledge base (Alavi & Leidner, 2001).